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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,879	12/13/2001	Heinz Forster	12102	2743

28484 7590 05/05/2003

BASF CORPORATION
LEGAL DEPARTMENT
1609 BIDDLE AVENUE
WYANDOTTE, MI 48192

EXAMINER

BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,879

Applicant(s)

FORSTER ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over BASF in view of Schneider et al.

3. BASF discloses a composite comprising two outer layers of metal having a thickness of 2-20 mm and a core layer of polyisocyanate-polyaddition product having a thickness of 10-100 mm, where the polyaddition product is the reaction product of isocyanates and an isocyanate-reactive component in the presence of 0.1-50 vol% gas and optional catalysts and additives (abstract). The composites are made by reacting the components between the two metal layers and are used to form structural components for bats, building constructions, etc. (abstract). However, the reference does not seem to indicate the use of inorganic acids in the polyurethane reaction mixture.

4. Schneider discloses polyurethane foams that perform well in closed molds made with mixtures of polyisocyanates, isocyanate-reactive compounds, and materials that liberate carbon dioxide as a blowing agent (abstract). The polyurethane foam mixtures have longer flow times to aid in processing (col. 2 lines 27-56). Tertiary amine catalysts are preferred as catalysts to speed carbon dioxide evolution (col. 4 lines 20-36),

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diphenylmethane diisocyanates containing carbodiimide groups are preferred as the isocyanate component (functionality greater than 2) (col. 5 lines 49-58), polymer polyols are preferred as the isocyanate-reactive components (col. 5 line 59-col. 6 line 18), and inorganic reaction retarders are noted for use in the invention (col. 9 lines 19-28). Metal molds are used to form the polyurethane foams (col. 9 lines 38-52). Example 1 shows a mixture comprising polymer polyols, foam stabilizers, a catalyst, a phosphoric acid reaction retarder, a blowing agent, and a polyisocyanate. The foaming reaction mixture is introduced into a mold and foamed to form an article having a density of 390 kg/m^3 . Schneider also notes the use of the foams in car bodies and as safety padding in motor vehicles (col. 10 lines 3-8). From Schneider's teaching of foaming mixtures that are easily injected into molds, it is the examiner's position that it would have been prima facie obvious to use Schneider's polyurethane mixtures in BASF's composites to ease the processing in the formation of metal-foam-metal composites due to the improved flow times of the polyurethane mixtures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb
April 30, 2003



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700